

REMARKS/ARGUMENTS

In the outstanding Final Office Action, Claims 1-11 were examined. Examiner objects to Claims 2, 3 5 and 6, and rejects Claims 1-11. In response to the above identified Final Office Action, Applicants amend Claims 1-6, 8 and 11 and cancel Claim 4. Applicants respectfully request reconsideration in view of the aforementioned amendment and the following remarks. Accordingly, Claims 1-11 are presented for examination.

I. Objection to the Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. In response, Applicants amend Claim 6 to overcome this objection.

II. Objection to the Claims

A. Examiner objects to Claim 5 because Claim 5 lacks certain definition. In response to this objection, Applicants amend Claim 5 to comply with Examiner's proposal.

B. Examiner objects to Claims 2 and 3 because Examiner believes "wherein (a) and (b) comprise" refer to steps in Claim 1 and should be spelled out in Claims 2 and 3. In response to this objection, Applicants amend Claims 2 and 3 to comply with Examiner's assessment. Accordingly, reconsideration and withdrawal of the objection of Claims 2 and 3 are respectfully requested.

III. Claims Rejected Under 35 U.S.C §102

A. Examiner rejects Claims 1 and 11 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,802,117 issued to Ghosh ("Ghosh"). To anticipate a claim, Examiner must show that a single reference teaches each of the elements of that claim.

The current invention comprises a method and a device for tracking a carrier frequency offset and a sampling frequency offset between a transmitter and a receiver in an Orthogonal

Frequency Division Multiplexing (“OFDM”) wireless communication system and compensating the offsets based on the offsets tracked.

In response to this rejection, Applicants amend Claims 1 and 11 to incorporate the element from Claim 4 that recites “calculating a gradient value of a straight line that corresponds to the phase offset on the time axis by using a linear regression method.” As a result of this amendment, Ghosh does not teach Claims 1 and 11, because it fails to teach or suggest “calculating a gradient value of a straight line that corresponds to the phase offset on the time axis by using a linear regression method.” Examiner has also agreed with Applicants’ view by conceding that Claim 4 is allowable if rewritten in independent form (Office Action mailed September 19, 2006, p.13, ¶ 14). Consequently, Applicants respectfully request reconsideration and withdrawal of the § 102 (b) rejection of Claims 11.

B. Claims 1, 7 and 11 are rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent No. 6,198,782 issued to De Courville et al. (“De Courville”). Similarly, for the reasons stated above, Claims 1 and 11, as amended, recites an element not disclosed by De Courville. De Courville teaches an apparatus for estimating carrier and clock frequency offsets in OFDM systems. However, De Courville does not disclose “calculating a gradient value of a straight line that corresponds to the phase offset on the time axis by using a linear regression method.” Consequently, Applicants respectfully request reconsideration and withdrawal of the § 102 (a) rejection of Claims 1 and 11.

With respect to Claim 7, this claim depends from Claim 1 and thus incorporates all the limitations of Claim 1. Thus, at least for the reasons stated above, De Courville does not teach every element of Claim 7. Consequently, reconsideration and withdrawal of the § 102 (a) rejection of Claim 7 are respectfully requested.

IV. Claims Rejected Under 35 U.S.C. § 103(a)

A. Examiner rejects Claims 8 and 9 under 35 U.S.C. § 103(a) as being unpatentable over De Courville. To establish a *prima facie* case of obviousness, Examiner must show that the cited references teach or suggest each element of the claim.

In response to this rejection, Applicants amend Claim 8 to recite “tracking the phase offset caused by the sampling frequency offset includes calculating a gradient value of a straight line that corresponds to the phase offset on the time axis by using a linear regression method.” Similarly, for the reasons stated above under Claim 1, De Courville does not teach or suggest each and every element of Claim 8. Consequently, Applicants respectfully request reconsideration and withdrawal of the § 102 (a) rejection of Claim 8.

Regarding Claim 9, this dependent claim depends from independent Claim 8 and thus incorporates the limitations thereof. At least for the reasons stated above, De Courville does not teach or suggest each and every element of Claim 9. Accordingly, Applicants respectfully request reconsideration and withdrawal of the § 103(a) rejection of Claim 9.

B. Examiner rejects Claim 6 under 35 U.S.C. § 103(a) as being unpatentable over De Courville in view of U. S. Patent No. 5,228,062 issued to Bingham (“Bingham”). In response to this rejection, Applicants respectfully request withdrawal of this rejection because Claim 6 depends from Claim 1 and De Courville no longer anticipates Claim 1 (see remarks above). As a result, De Courville does not teach or suggest each and every element of Claim 6.

Bingham does not cure the deficiency of De Courville. Examiner has not relied upon and Applicants have been unable to discern any part of Bingham that teaches “calculating a gradient value of a straight line that corresponds to the phase offset on the time axis by using a linear regression method.” As a result, the combination of De Courville and Bingham fails to teach or suggest each and every element of Claim 6. Consequently, reconsideration and withdrawal of the § 103(a) rejection of Claim 6 are respectfully requested.

C. Claims 2 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over De Courville and in view of U. S. Patent No. 7,009,932 issued to Matheus et al (“Matheus”).

In response to this rejection, Applicants respectfully request withdrawal of this rejection because Claim 2 depends from Claim 1 and De Courville no longer teaches Claim 1 (see remarks above). Similarly, De Courville does not anticipate Claims 10 because of its dependency from Claim 8 (see remarks above).

Furthermore, Matheus does not cure the deficiency of De Courville. Examiner has not relied upon and Applicants have been unable to discern any part of Matheus that teaches “calculating a gradient value of a straight line that corresponds to the phase offset on the time axis by using a linear regression method.” Thus, the combination of De Courville and Matheus fails to teach or suggest each and every element of Claims 2 and 10. Accordingly, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. §103(a) rejection of Claims 2 and 10.

D. Claims 1-3, 6 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bingham in view of De Courville. In response to this rejection, because Applicants amend Claims 1 and 11 to incorporate a novel element of Claim 4, the combination of Bingham and De Courville does not teach or suggest each and every element of Claims 1 and 11. Consequently, reconsideration and withdrawal of the § 103(a) rejection of Claims 1 and 11 are respectfully requested.

With respect to Claims 2, 3 and 6, these claims depend from independent Claim 1 and thus incorporate all the limitations thereof. Therefore, for the reasons stated above, Bingham in view of De Courville does not teach or suggest each and every element of Claims 2, 3 and 6. Consequently, Applicants respectfully request reconsideration and withdrawal of the § 103 (a) rejection of Claims 2, 3 and 6.

V. Allowable Subject Matter

Applicants note with appreciation Examiner’s indication that Claims 4 and 5 contain allowable subject matter.

CONCLUSION

In view of the foregoing, it is submitted that claims 1-11 patentably define the subject invention over the cited references of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If Examiner believes a telephone conference would be useful in moving the case forward, he is encouraged to contact the undersigned at (310) 207-3800.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly, extension of time fees.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop: Amendments, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on December 18, 2006.


Linda Metz

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